

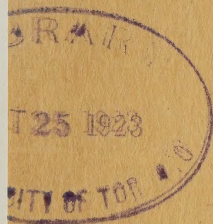
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# CANADIAN DAIRYING

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DOMINION OF CANADA  
DEPARTMENT OF AGRICULTURE

# Canadian Dairying



PUBLISHED BY DIRECTION OF THE HONOURABLE W. R. MOTHERWELL  
MINISTER OF AGRICULTURE,  
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This pamphlet has been prepared by the Dominion of Canada Department of Agriculture with the object of giving concise information as to the development and present status of the Dairy Industry in Canada.

The statistics as to production and values quoted in the first section are compiled by the Dominion Bureau of Statistics; those in the section relating to the Provinces of Canada are supplied by the provinces.



## CONTENTS

CANADIAN DAIRYING.....	5
General Survey.....	5
Recent Developments.....	5
OUTPUT AND VALUE.....	6
Dairy Production, 1921.....	6
Value of all Dairy Factory Products, 1911-21.....	6
Creamery Butter.....	6
Creamery Butter, Quantity and Value, by Provinces, 1920, 1921 and 1922.....	7
Cheese.....	7
Cheese—Quantity and Value, by Provinces, 1920, 1921 and 1922.....	7
Condensed Products.....	7
Powdered Milk.....	7
Quantity and value, condensed and miscellaneous products, 1920-1921.....	9
Increase in Production.....	9
Creamery Butter Production—quantity—1911-22.....	9
Factory Cheese Production—quantity—1911-22.....	9
Miscellaneous Products—value—1911-21.....	9
Number of cows—1911-21.....	9
Domestic consumption—Canada, United States, United Kingdom	10
MANUFACTURE.....	10
Character of Dairy Factory Organization.....	10
Capital Employed.....	10
Number of Factories and Patrons.....	10
Number of Establishments and Amount Invested, by Provinces...	11
Milk and Cream Delivered, Amount Paid Patrons, Number of Cows Supplying Milk to Factories.....	11
MARKETS AND MARKETING.....	11
Exports and Imports.....	11
Cheese.....	11
Butter.....	12
Other Dairy Products.....	12
Export Facilities.....	13
Oleomargarine and Renovated Butter Prohibited.....	13
Exports via Montreal—Cheese and Butter.....	13
GOVERNMENT REGULATION AND SUPERVISION.....	13
Dairy Products Grading.....	14
Inspection of Condensed Products.....	14
Dominion Experimental Farms.....	14
Tuberculosis Control.....	15
Record of Performance.....	15
World Records held by Canadian Cows.....	15
The "Canadian" Cow.....	17

CONTENTS—*Concluded.*

## THE PROVINCES OF CANADA:

Ontario.....	19
Quebec.....	21
Manitoba.....	22
Saskatchewan.....	23
Alberta.....	25
British Columbia.....	26
Nova Scotia.....	28
New Brunswick.....	28
Prince Edward Island.....	30

## DIRECTORY:

Government Officials.....	31
Dairy Organizations.....	32



## CANADIAN DAIRYING

### General Survey

**D**AIRYING, one of the most important of Canadian agricultural industries as well as one of the oldest, began its development in its modern form with the introduction of the centralized or factory system of making cheese and butter, the centrifugal cream separator, and improved cold storage facilities. The first Canadian cheese factory was established in the province of Ontario in 1864, the first butter factory, in the province of Quebec, in 1873. The year 1882 witnessed the introduction of the first cream separator from Denmark, while the government organization of cold storage services dates from 1895. The factory system, a semi-co-operative plan for the manufacture of milk, immediately became popular, and for many years practically all the cheese has been manufactured on this plan. While the output of butter factories or creameries is great and is continually increasing, 68 per cent of the total quantity of butter produced was, according to the Census of 1911, made on the farms, either for home consumption or for near-by markets.

The factory system of manufacture is common to all the provinces of Canada, but the older provinces, Ontario and Quebec, with their greater population, lead all others in the volume of output, these two provinces producing approximately 97 per cent of the total cheese and 68 per cent of the total creamery butter.

### Recent Developments

Three important changes have taken place in the Canadian dairy industry of recent years. These are a decrease in the production of factory cheese from 220,833,269 pounds in 1900 to 134,530,053 pounds in 1922, an increase in creamery butter production from 36,066,739 pounds in 1900 to 146,863,517 pounds in 1922, and an increase in condensed milk products, which in the period, 1900-1922, have grown in value from \$269,520 to \$6,839,232.

In the provinces of Manitoba, Saskatchewan and Alberta the dairy industry has developed since 1910 in a remarkable manner, the output of creamery butter having increased from 4,161,947 pounds, valued at \$459,254 in 1910, to 28,619,641 pounds, valued at \$10,348,762 in 1921. A further increase in 1922 over 1921 is recorded, as follows: Manitoba, 23.5 per cent, Saskatchewan, 25 per cent, and Alberta, 20 per cent.

During this period, these provinces, from importers have become exporters of butter to the Eastern Canada markets and to British Columbia. The quality of the product due to efficient control is at least equal to that produced in any other part of the Dominion, and has secured a good reception in the British market in competition with that of other countries.

Increased production has coincided with the number of cows kept, and with the establishment of creameries. The number of cows in the three provinces in 1910 was 427,671, compared with 1,100,288 in 1922, and creameries are now accessible generally.

In Canadian factories the cheese manufactured is mostly of the Cheddar type. Genuine Stilton is turned

out on the Dominion Experimental Farm at Agassiz, B.C., and a soft cheese, known as Meilleur, has been originated at the Central Experimental Farm, Ottawa. The Trappist monks at the Oka Agricultural Institute in Quebec make what is known as Oka cheese. Cottage cheese is made to a limited extent on the farm from sour skim-milk without the aid of rennet.

## OUTPUT AND VALUE

An estimate of the total value of the dairy products of Canada, made for the year 1921 by the Dominion Dairy Commissioner and the Dominion

Bureau of Statistics, placed it at \$212,896,350. The details as to quantities and values are as follows:—

DAIRY PRODUCTION, 1921

Product	Quantity	Value
Cheese.....	Lbs. 162,117,494	\$ 28,710,030
Creamery butter.....	" 128,744,610	48,135,439
Farm butter.....	" 125,000,000	37,500,000
Whey butter.....	" 1,337,404	431,114
Condensed milk.....	" 38,997,936	5,837,787
Condensed skim-milk.....	" 1,307,781	51,788
Evaporated milk.....	" 31,202,713	3,428,456
Condensed coffee and cocoa.....	" 324,011	94,065
Milk powder.....	" 1,703,496	554,918
Skim-milk powder.....	" 5,749,229	830,585
Sterilized milk.....	" 6,696,264	719,009
Casein.....	" 98,136	9,814
Ice cream.....	Gals. 5,736,702	8,287,000
Cream sold by dairy factories.....	Lbs. B. fat 8,051,215	5,734,638
Buttermilk sold.....		300,278
Milk for direct consumption.....		72,000,000
Curd, cheese, whey, whey cream, skim-milk.....		271,429
Total value.....		\$212,896,350

In the foregoing statement the quantity of butter produced on farms, and designated "Farm Butter," is estimated.

The total value of the products of Canadian dairy factories, omitting farm-made butter, etc., for the years 1911, 1917, 1920, 1921, follows:—

VALUE OF ALL DAIRY FACTORY PRODUCTS,  
1911-21

1911.....	\$ 39,047,840
1917.....	93,879,326
1920.....	146,336,491
1921.....	111,924,017

## Creamery Butter

The total quantity of creamery butter produced in Canada in 1922 was 146,863,517 pounds (preliminary figures) compared with 128,744,610 in 1921. The production of creamery butter has increased about two and a half times during the last twelve years in Ontario and Quebec. In the Western Provinces, the production, while relatively small, has increased at an even greater ratio.



QUANTITY AND VALUE OF CREAMERY BUTTER, BY PROVINCES, 1920, 1921 AND 1922

Province	1920		1921		1922
	Quantity	Value	Quantity	Value	Quantity
	lbs.	\$	lbs.	\$	lbs.
Prince Edward Island.....	1,166,032	674,744	1,109,546	452,523	1,274,622
Nova Scotia.....	2,503,188	1,518,757	3,094,768	1,306,465	3,296,566
New Brunswick.....	1,053,649	606,891	1,152,168	475,112	1,218,969
Quebec.....	41,632,511	23,580,949	48,478,403	17,594,921	52,529,544
Ontario.....	37,234,998	21,343,858	48,471,532	16,680,247	51,000,000
Manitoba.....	7,578,549	4,282,131	8,541,095	3,253,057	10,559,601
Saskatchewan.....	6,658,656	3,727,140	7,030,053	2,552,698	8,891,450
Alberta.....	11,821,291	6,555,509	13,048,493	4,543,007	15,175,300
British Columbia.....	2,062,844	1,334,624	2,818,552	1,277,409	2,917,665
Totals.....	111,691,718	63,625,203	128,744,610	48,135,439	146,863,517

## Cheese

The quantity of cheese made on the farms is negligible. The total quantity of factory cheese produced in 1922 was 134,530,053 pounds (preliminary figures). These figures show a decrease of 27,587,441 pounds over 1921. Five provinces showed an increase and four a decrease. The increases were as follows: Prince Edward Island, 484,189 pounds; Nova

Scotia, 2,420 pounds; Quebec, 3,106,707 pounds; Alberta, 547,346 pounds; and British Columbia, 21,840 pounds. The decreases were: New Brunswick, 181,866 pounds; Ontario, 6,759,066 pounds; Manitoba, 30,829 pounds; and Saskatchewan, 2,659 pounds.

The following table shows, by provinces, the production and value of factory cheese for the years 1920 and 1921, and the production for 1922.

QUANTITY AND VALUE OF FACTORY CHEESE, BY PROVINCES, 1920, 1921 AND 1922

Province	1920		1921		1922
	Quantity	Value	Quantity	Value	Quantity
	lbs.	\$	lbs.	\$	lbs.
Prince Edward Island.....	2,081,277	525,635	1,681,779	293,651	1,742,242
Nova Scotia.....	52,638	14,865	29,440	5,578	31,860
New Brunswick.....	1,235,008	336,409	1,100,382	203,941	918,496
Quebec.....	52,162,777	13,372,250	54,242,735	9,197,911	39,679,901
Ontario.....	92,784,757	24,605,823	103,432,696	18,676,380	90,500,000
Manitoba.....	116,229	31,611	255,829	47,341	225,000
Saskatchewan.....	28,367	7,790	22,659	4,209	20,000
Alberta.....	598,750	110,355	930,660	200,478	975,000
British Columbia.....	342,053	96,134	421,314	80,541	437,554
Totals.....	149,201,856	39,100,872	162,117,494	28,710,030	134,530,053

## Condensed Products

During the last twenty years the manufacture of condensed and dried milk has become well established, particularly in Western Ontario, while the manufacture of ice cream is now an important industry in all parts of Canada.

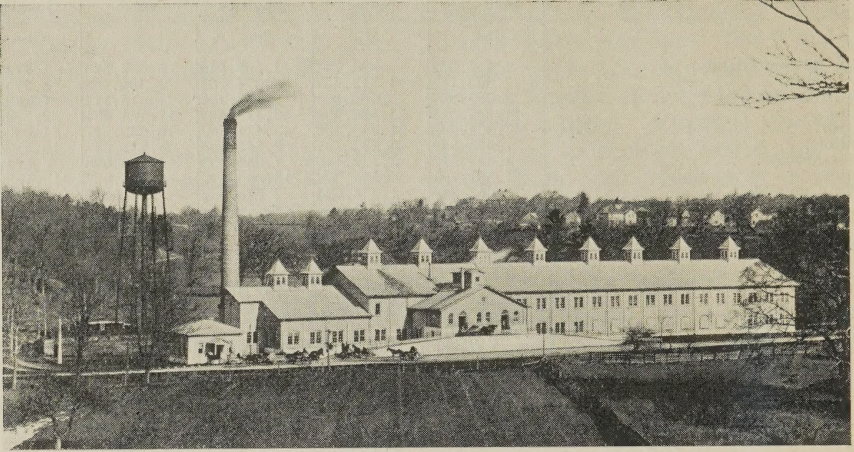
The first milk-condensing plant was established in Truro, Nova Scotia, in 1883. There are in Canada at the present time, 23 plants engaged in the manufacture of condensed or evapor-

ated products, including milk powder and sterilized milk. The output of these products was valued in 1900 at \$269,520, in 1921 at \$11,526,422, and in 1922 at \$6,839,232.

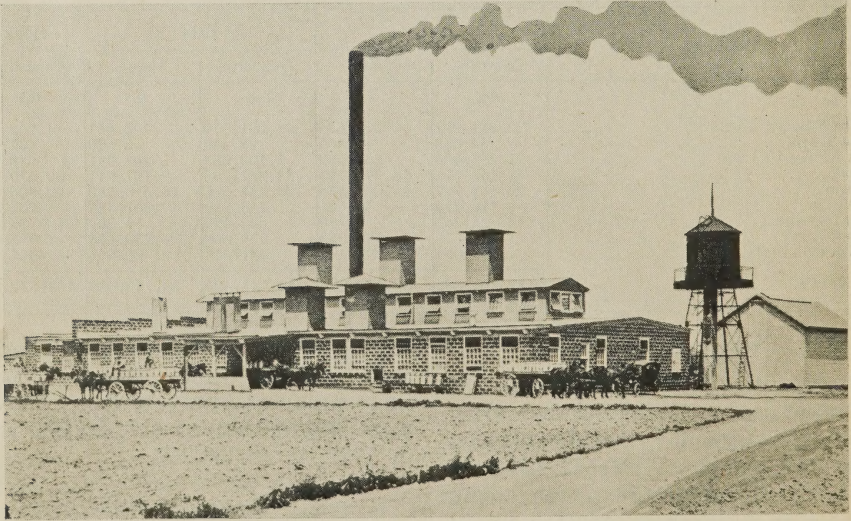
## Powdered Milk

The manufacture in Canada of milk powder by modern spray processes dates from 1909, although the hot roller process was in operation commercially several years earlier. At the present time there are ten produc-





Plant at Tillsonburg, Ontario, for the Manufacture of Condensed Milk.



Powdered Milk Plant of Modern Construction and Equipment at Burford, Ontario.



ing plants engaged for the most part in the manufacture of skim-milk powder. Other kinds of powder are, however, manufactured to a considerable extent, including whole milk and cream powders, as well as modified milk powder, protein milk powder, and ice cream powder. It is esti-

mated that, in 1923, upwards of 100,000,000 pounds of milk will be marketed in the form of powders of various kinds.

The following tables give the production and value of condensed and miscellaneous dairy products for the years 1920 and 1921:—

CONDENSED PRODUCTS, 1920 AND 1921

Product	1920		1921	
	Quantity	Value	Quantity	Value
	lbs.	\$	lbs.	\$
Condensed milk.....	53,662,699	10,202,230	38,997,936	5,837,787
Condensed skim-milk.....	363,294	18,723	1,307,781	51,788
Evaporated milk.....	30,469,642	3,809,653	31,202,713	3,428,456
Milk powder.....	7,574,668	2,178,176	1,703,496	554,918
Skim-milk powder.....	.....	.....	5,749,229	830,585
Sterilized milk.....	7,608,927	785,044	6,696,264	719,009
Condensed coffee and cocoa.....	531,451	147,052	324,011	94,065
Casein.....	109,958	19,233	98,136	9,814
Totals.....	.....	17,160,111	.....	11,526,422

MISCELLANEOUS PRODUCTS, 1920 AND 1921

Product	1920		1921	
	Quantity	Value	Quantity	Value
	lbs.	\$	lbs.	\$
Whey butter.....	1,516,932	757,156	1,337,404	431,114
Ice cream.....	2,996,514	4,151,949	3,007,337	3,967,918
Milk sold.....	28,199,796	14,249,858	27,003,785	12,846,749
Cream sold (lb. butter fat).....	7,379,131	6,533,098	8,051,215	5,734,638
Buttermilk sold.....	.....	306,235	.....	300,278
Sundry.....	.....	452,009	.....	271,429
Totals.....	.....	26,450,305	.....	23,552,126

### Increase in Production

That the volume of production of the dairy industry in Canada is steadily increasing, is indicated by the following statement of the annual factory output over a period of years:

#### CREAMERY BUTTER PRODUCTION

Quantity	Pounds
1911.....	64,698,165
1916.....	82,564,130
1920.....	111,691,718
1921.....	128,744,610
1922.....	146,863,517

#### FACTORY CHEESE PRODUCTION

Quantity	Pounds
1911.....	199,904,205
1916.....	192,968,597
1920.....	149,201,856
1921.....	162,117,494
1922.....	134,530,053

The diversion of milk from cheese factories to condensed milk and milk powder factories and increased demand from growing urban population

for milk, cream, butter, and ice cream, have resulted in the cheese output declining or remaining stationary.

#### MISCELLANEOUS PRODUCTS

##### Value

#### CONDENSED AND EVAPORATED MILK, CREAM, ICE CREAM AND WHOLE MILK, ETC.

1911.....	\$ 1,814,871
1917.....	18,424,485
1920.....	43,610,416
1921.....	35,699,581

Further evidence of increased production is found in the number of dairy cows kept on Canadian farms:

#### NUMBER OF DAIRY COWS

1911.....	2,595,255
1916.....	2,835,532
1920.....	3,530,238
1921.....	3,736,832

It is estimated that the average yield of milk per year of milk cows in the Dominion is about 4,000 pounds.

DOMESTIC CONSUMPTION  
AVERAGE PER CAPITA CONSUMPTION OF DAIRY PRODUCTS IN CANADA, THE UNITED STATES AND THE UNITED KINGDOM

Country	Year	Milk	Butter	Cheese
		gallons	lbs.	lbs.
Canada .....	1916	26·0	27·7 (1911)	3·0 (1911)
United States .....	1920	43·0	15·5 (1919)	4·2 (1919)
United Kingdom .....	1914	22·2	1·0 (1914)	11·2 (1905)

## MANUFACTURE—CHARACTER OF DAIRY FACTORY ORGANIZATION

Of the total factories in operation in 1921, 2,177 were operated by individuals and partnerships, 478 by incorporated companies and 459 by co-operative associations.

The classification as to the number of days operated in the year is as follows:—

Land and buildings .....	\$ 13,655,472
Machinery and equipment .....	13,096,066
Products on hand .....	4,012,059
Cash and operating accounts .....	4,494,234

Total .....

### Number of Dairy Factories and Patrons

In 1921 there were 3,114 dairy factories in operation. Of these, 1,092 were creameries, 1,619 cheese fac-



A combined Cheese and Butter Factory in the Province of Ontario.

Number of factories operating for 240 days and over .....	817
Number operating for 180 to 239 days .....	1,154
Number operating for 120 to 179 days .....	1,046
Number operating for less time .....	97

### Capital Employed in Dairy Factories

The total amount of capital employed by dairy factories in 1921 was \$35,257,831, the following being the allocation:—

tories, 376 combined butter and cheese factories, and 27 were condenseries. While the total number of factories showed a decrease as compared with 1919 and 1920, the number of farmers supplying milk and cream increased, being 312,369 in 1921 compared with 276,693 in 1920 and 275,060 in 1919.



NUMBER OF ESTABLISHMENTS AND AMOUNT INVESTED  
IN DAIRY FACTORIES, BY PROVINCES, 1921

Provinces	Establish- ments	Capital Invested
	No.	\$
Prince Edward Island.....	34	167,381
Nova Scotia.....	24	436,636
New Brunswick.....	38	302,922
Quebec.....	1,766	7,048,603
Ontario.....	1,062	18,191,626
Manitoba.....	51	2,338,647
Saskatchewan.....	56	2,592,319
Alberta.....	50	2,536,781
British Columbia.....	28	1,077,150
Total.....	3,114	55,257,831

### Milk and Cream Delivered and Amount Paid Patrons

The quantity of milk delivered to  
factories in 1921 was 2,965,222,121

pounds, and the quantity of cream  
was 88,263,208 pounds (butter fat  
content), increases being shown in  
both products over the previous year.  
The amount paid to patrons for milk  
and cream in 1921 was \$81,422,226.  
The average price for milk was \$1.57  
per 100 pounds, and the average price  
for cream per pound (butter fat con-  
tent) was 39 cents.

### Number of Cows

The number of cows supplying milk  
to factories was 1,851,199 in 1921,  
compared with 1,718,999 in 1920.

## MARKETS AND MARKETING—EXPORTS AND IMPORTS

The United Kingdom is Canada's  
chief export market for dairy pro-  
ducts. It may be said indeed to be  
the only export market of primary  
importance. Canada's cheese has long  
held, and continues to hold, a premier  
position in that market. As regards  
butter, the export surplus is too ir-  
regular at present to establish its  
position securely, although prospects  
for expansion are distinctly encour-  
aging.

The exports of all dairy products  
show an increase in volume during  
the last ten years, except cheese,  
which slightly decreased. The most  
important increase has been in con-  
densed and preserved milk, and, more  
recently, in the butter exports.

In the butter-making industry, the  
present rate of increase in exports  
(3,142,682 pounds in 1911 and 21,-  
994,578 pounds in 1923) is expected  
to be maintained, in view of the estab-  
lishment of government grading, the  
organization of the business in West-  
ern Canada and the possibilities for  
extension existing in that part of the  
country and elsewhere.

### Cheese

Of the cheese exported, practically  
the whole finds its way to the United  
Kingdom, where it is well known to  
the British consumer. The export  
business in cheese grew rapidly from  
1870 to 1900. In later years the in-  
crease has not been so marked on  
account of increased domestic demand  
for dairy products.

CHEESE EXPORTS AND IMPORTS, CANADA, 1911-23

Exports			Imports		
Year	Quantity	Value	Year	Quantity	Value
	lbs.	\$		lbs.	\$
1911.....	181,895,724	20,739,507	1911.....	866,653	171,269
1916.....	168,961,583	26,690,500	1916.....	971,821	187,873
1920.....	126,395,777	36,356,863	1920.....	362,693	206,500
1921.....	133,620,300	37,146,722	1921.....	551,040	253,647
1922.....	133,849,800	25,440,322	1922.....	877,357	325,297
1923.....	114,548,900	20,828,234	1923.....	916,517	327,022

### Butter

Butter is exported to various countries; the excess of exports over imports has become great only during the last fiscal year. In the fiscal year of 1922-23 the total amount exported was 21,994,578 pounds, the excess of exports over imports being 18,227,005 pounds. The destination of the ex-

ports was varied, 17,527,607 pounds going to the United Kingdom; 2,423,086 pounds to the United States; and various small amounts to Belgium, Bermuda, British Guiana, British West Indies, China, Cuba, Newfoundland and other countries.

The butter exports and imports of recent years are as follows:—

BUTTER EXPORTS AND IMPORTS, CANADA, 1911-23

Exports			Imports		
Year	Quantity	Value	Year	Quantity	Value
	lbs.	\$		lbs.	\$
1911.....	3,142,682	744,288	1911.....	1,227,390	296,303
1916.....	3,441,183	1,018,769	1916.....	4,309,831	1,092,800
1920.....	17,612,605	9,844,359	1920.....	397,955	176,994
1921.....	9,739,414	5,128,831	1921.....	3,741,628	1,805,709
1922.....	8,430,591	3,224,390	1922.....	6,078,882	1,883,013
1923.....	21,994,578	8,243,138	1923.....	3,767,573	1,349,819

### Other Products

Condensed and preserved milk was exported in 1923 principally to the United Kingdom (9,949,600 pounds); United States (5,822,600 pounds); British West Indies (1,756,300 pounds); Belgium (148,200 pounds); Cuba (1,515,700 pounds); Netherlands (4,126,000 pounds); Newfound-

land (546,800 pounds); Germany (388,900 pounds); and to numerous other countries in various small amounts.

Exports of milk powder, fiscal year 1923, total 3,927,952 pounds; to United Kingdom 1,229,888 pounds; to United States 1,475,816 pounds; to Germany 1,136,238 pounds.

EXPORTS AND IMPORTS OF MILK AND MILK PRODUCTS, 1916-23

	Year	Imports		Exports	
		Quantity	Value \$	Quantity gals.	Value \$
Cream.....	1916	.....	.....	1,262,280	1,131,832
	1920	.....	.....	795,780	1,122,424
	1921	.....	.....	1,279,195	1,987,461
	1922	.....	.....	1,671,678	2,479,080
	1923	.....	.....	1,712,241	2,793,937
Milk, fresh.....	1916	.....	.....	394,831	59,028
	1920	.....	.....	1,985,113	576,666
	1921	.....	.....	1,508,618	412,916
	1922	.....	.....	1,391,299	311,922
	1923	.....	.....	856,039	189,301
Milk and Cream, fresh.....	1916	.....	13,914	.....	.....
	1920	.....	18,652	.....	.....
	1921	.....	45,973	.....	.....
	1922	.....	33,055	.....	.....
	1923	.....	28,274	.....	.....
Milk powder (formerly included in next following item).....	1922	.....	.....	909,208	204,090
	1923	.....	.....	3,927,952	383,855
Milk, condensed, canned or preserved (includes milk powder prior to 1922) ..	1916	lbs. 53,258	3,987	13,247,800	770,566
	1920	75,652	10,730	54,247,500	8,517,771
	1921	131,026	21,215	49,147,500	8,187,937
	1922	164,654	27,219	33,133,500	4,881,020
	1923	209,606	46,387	26,381,200	2,861,058
Casein.....	1916	.....	24,372	50,564	3,282
	1920	1,234,635	159,177	.....	.....
	1921	1,047,713	129,017	.....	.....
	1922	217,613	19,689	2,615	1,413
	1923	643,347	92,710	20,060	1,281



### Export Facilities

The butter and cheese destined for overseas markets is exported chiefly through the port of Montreal during the season that navigation is open, and, during the winter months, from St. John, N.B. A new and completely equipped cold storage warehouse of large capacity has recently been erected at Montreal by the Harbour Board. The plant is located on the harbour front and is accessible by all the railways entering Montreal.

Most of the steamers in the regular trade with the United Kingdom are now equipped with cold storage facilities.

### Oleomargarine and Renovated Butter Prohibited

In 1917, the entry of oleomargarine and its manufacture and sale in

Canada was permitted as a war measure. By a recent decision of Parliament, its import and manufacture after September 1, 1923, and its sale after March 1, 1924, was again prohibited. The importation, manufacture and sale of renovated butter and of "filled" milk or cream (that is milk or cream containing fat other than that of milk) is prohibited.

### Exports via Montreal

The total exports of butter and cheese from Montreal for the years 1910 to 1922, inclusive, were as follows:—

	Cheese boxes	Butter pks. (Average of 56 lbs.)
1910.....	1,892,235	27,884
1915.....	1,851,731	54,495
1920.....	1,407,548	10,357
1921.....	1,441,779	70,369
1922.....	1,166,147	318,144

## GOVERNMENT REGULATION AND SUPERVISION

Government regulation and supervision of the dairy industry and its development, from the Federal point of view, is in the hands of the Dairy and Cold Storage Branch of the Dominion Department of Agriculture, Ottawa, with a commissioner at its head, who administers all Federal dairy enactments. The grading of dairy produce is under the control of this Branch. Among its other important functions are: (1) Cargo inspection both at Canadian ports and in the United Kingdom. By means of this service defects in handling, packing and shipping, and temperatures during transit are reported. (2) The inspection of public cold storage warehouses; (3) The granting of subsidies to cold storages; (4) The issuing of market reports; (5) The encouragement of cow testing by owners of dairy herds; (6) The conducting of educational Butter and Cheese Scoring Contests, under which samples of the output from all parts

of Canada are scored and reported upon to the makers, with a view to establishing a uniformly high standard, and (7) the operating of a model demonstration factory. The education of the public as to the nutritive value of milk and milk products, particularly in the diet of the young, has recently been undertaken by the Branch.

Under government auspices associations have been very generally established in all the provinces for testing the production of individual cows in the dairy herd. A progressive increase in milk and fat production has followed, as the following figures indicate:—

AVERAGE PRODUCTION IN	TESTED	DAIRY	HERDS
	1915	1919	1921
Average production, milk, lbs.....	5,285	5,522	5,801
Average production, fat, lbs..	195.5	207.9	214.1

The number of cows under test was 1919, 22,517; 1920, 33,382; 1921, 47,895 (exclusive of Saskatchewan).

The work of the dairy schools of the different provinces and the employment of inspector-instructors who visit the factories from time to time, have resulted in greater uniformity in the quality and character of the cheese and creamery butter produced in widely separated parts of the country, while the various activities of the Dominion Department of Agriculture in disseminating dairy information, in correlating the provincial educational work, in providing refrigerator car services, and encouraging the insulation of cold storage space on transatlantic steamers, have helped materially to place Canadian dairy produce on the markets of the United Kingdom and other countries in the best possible condition.

#### **Dairy Produce Grading**

The government grading of all creamery butter and factory cheese intended for export, according to established standards, was inaugurated on April 1, 1923. Previous to that time, export cheese, sold by auction at Montreal, had been graded, while several of the provinces had, for a number of years, undertaken more or less educational grading both of cheese and butter. With the grading and classification of all export dairy products, buyers abroad may absolutely rely on these products conforming to standard.

The government grading of cream at the creamery was recently instituted, under provincial auspices, in each of three Prairie Provinces, Manitoba, Saskatchewan and Alberta, and also in Nova Scotia. The

extension of this system to other provinces is looked for.

#### **Inspection of Condensed Products**

Establishments in which milk is condensed, evaporated or otherwise preserved for food for export, either out of Canada or out of any province to any other province thereof, are inspected under the Meat and Canned Foods Act by officers of the Dominion Department of Agriculture. Regulations thereunder provide that the materials used shall be sound and wholesome, that containers shall be properly sterilized, that no deleterious drug, dye or preservative may be used, and that the label shall show the name and address of the manufacturer and give a true description of the contents.

#### **Dominion Experimental Farms**

The work of the Dominion Experimental Farm System in relation to dairy husbandry is both extensive and varied. Comparisons are conducted in the grading up of dairy herds, and feeding studies are carried on. These investigations extend to many of the branch farms in all sections of the Dominion. Several different kinds of cheese are manufactured, including a soft cheese known as Meilleur, which was originated at the Central Farm, Ottawa.

The following is a list of the Farms and Stations belonging to the Dominion Experimental Farms System which maintain pure-bred herds of dairy cattle, together with the name of the breed:—



Province	Station	Breed
Prince Edward Island.....	Charlottetown.....	Ayrshire
Nova Scotia.....	Kentville.....	Shorthorn
	Nappan.....	Guernsey
New Brunswick.....	Fredericton.....	Holstein, Ayrshire
Quebec.....	Lennoxville.....	Ayrshire, Jersey, Shorthorn
	Cap Rouge.....	French-Canadian
	Ste Anne de la Pocatière.....	Ayrshire
	La Ferme.....	Ayrshire
Ontario.....	Central Experimental Farm.....	Ayrshire, Holstein, Jersey,
	Ottawa.....	French-Canadian
	Kapuskasing.....	Ayrshire, Shorthorn
Manitoba.....	Brandon.....	Shorthorn (Dual-purpose)
	Morden.....	Ayrshire
Saskatchewan.....	Indian Head.....	Shorthorn
	Scott.....	Shorthorn
	Rosthern.....	Holstein
	Swift Current.....	Shorthorn
Alberta.....	Lacombe.....	Holstein, Aberdeen-Angus
British Columbia.....	Agassiz.....	Holstein
	Sidney.....	Jersey
	Invermere.....	Ayrshire

### Tuberculosis Control

Regulations under the Animals Contagious Diseases Act provide for the inspection and testing of pure bred herds for bovine tuberculosis by the Veterinary Director General, and the accrediting of such herds.

Imported animals are subjected to the tuberculin test before admission to Canada, unless coming from accredited herds in the United States, with which country a reciprocal arrangement exists.

The Dominion Municipal Tuberculosis Order, 1917, is designed to assist cities and towns to secure a tuberculosis free milk supply. Provision is made for the classification of dairy herds into Class "A" herds, which are tuberculosis free, and Class "B" herds, from which the milk must be pasteurized.

### Record of Performance

The production of pure bred dairy cows is ascertained by a systematic weighing and testing of the milk, carried on according to the requirements of the Canadian Record of Performance. Cows that reach the production standard required by the associations representing the different breeds are awarded certificates. This leads to

the elimination of low producers, and to breeding only from high producing strains.

The Canadian record of performance for pure-bred dairy cows shows that the number of certificates issued to cows that had qualified up to April 1, 1923, was 8,029. According to breeds, the numbers were as follows: Holstein-Friesian, 3,227; Ayrshire, 2,541; Jersey, 1,316; Shorthorn, 653; Guernsey, 145; French Canadian, 135; Red Polled, 12.

### World Records Held by Canadian Cows

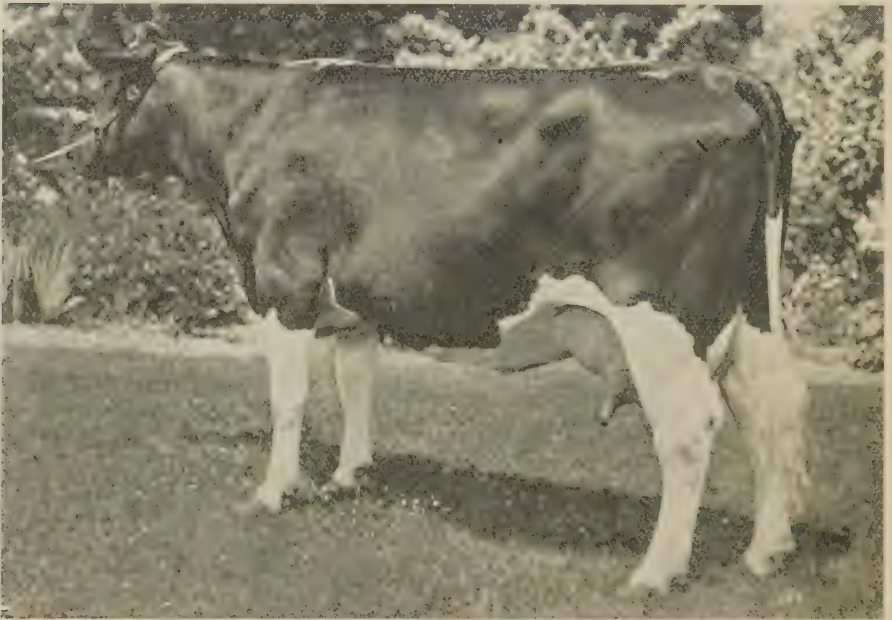
The World's Record for the highest amount of butter fat produced in 365 days was obtained by "Bella Pontiac" in 1920-21, a Canadian bred cow owned by Thomas A. Barron, Brantford, Ontario. Her production was 27,191 pounds of milk and 1,270 pounds of fat.

In 1921-22, the world's record was secured by "Agassiz Segis May Echo," another Holstein-Friesian cow, bred and owned in Canada, the property of the Dominion Experimental Farm at Agassiz, British Columbia, with a record of 30,886 pounds of milk and 1,345 pounds of butter fat.

Again, in 1923, the world's record for butter fat production was broken



The present holder of the world's record for milk and butter-fat production: De Kol Plus Segis Dixie, 25787. Owned by Donat Raymond, Vaudreuil, Que. Bred in Canada.



The previous world record holder: the Holstein-Friesian Cow, Agassiz Segis May Echo, owned by the Dominion Experimental Farm, Agassiz, B.C. Bred in Canada.



and is at present held by a Canadian bred cow. This is "Dekol Plus Segis Dixie," owned by D. Raymond, Vaudreuil, Quebec. This cow, freshening at the age of nine years and three months, produced, under official test, 33,477.3 pounds of milk, containing 1,686.5 pounds of butter in 365 con-

secutive days, this being the second time that she has been the title holder.

The world's championship for grade cows is also claimed for the Holstein-Friesian cow, "Dairy Maid," the property of Alex Davie, of Ladner, B.C., with a record of 22,514 pounds of milk and 1,132.06 pounds of butter in 365 days.

### THE "CANADIAN" COW

The "Canadian" or "French-Canadian" cow is of native origin, tracing back to cattle (including cattle from Normandy and Brittany) introduced at the beginning of the 17th century, making it one of the oldest breeds in North America. In colour, the breed varies from solid black to fawn, but a brown skin is preferred with fawn stripes along the back and a grey or yellow ring around the muzzle. The similarity between this and the Jersey breed is not due to infusion of Jersey blood, but simply shows identity of origin with the Channel Islands' cattle. Climatic influences and the treatment received during two and a half centuries have given rise to modifications of colour and conformation, but aptitudes and qualities have been maintained. The breed is noted for ruggedness, frugal-

ity, a milk rich in fat, (4.5), and a long milking period. The quantity of milk produced is a little less than that of the Jersey and Guernsey breeds.

Although the French-Canadian cow is an old breed in the Province of Quebec, it was not until 1880 that the work of improvement was begun. In 1886, a Herd Book was established, and in 1895, The French-Canadian Cattle Breeders' Association was formed. Endeavours are now being made to improve the breed as regards fineness of form, early maturity, increased weight, and milk production.

A year's records made by eight cows of the herd of Canadian Cows at the Oka Agricultural Institute, La Trappe, Que, follows:

Subjects	Milk	Fat	Butter
	lbs.	lbs.	lbs.
Baronne d'Oka.....	10,341	401	472
Colombette.....	9,469	397	467
Pivoine.....	9,394	481	566
Fauvette.....	9,248	410	482
Epervière.....	8,291	357	420
Chanterelle.....	8,102	396	466
Selve.....	7,490	335	394
Musette.....	7,485	338	398
Verveine.....	6,890	310	365
<i>Average production.....</i>	8,273	380	447



The "Canadian" Cow,—a breed originated in Canada. The herd at the Oka Agricultural Institute, La Trappe, Quebec.



## THE PROVINCES OF CANADA

### ONTARIO

While the agricultural products of the Province of Ontario are very varied in character, there is no specialty that has proved more dependable and profitable than dairy-ing. The total value of the Provincial dairy factory output in 1921—the last year for which complete

returns are available—was \$73,602,500, which is over four million dollars greater than the value of the combined output of all the other provinces.

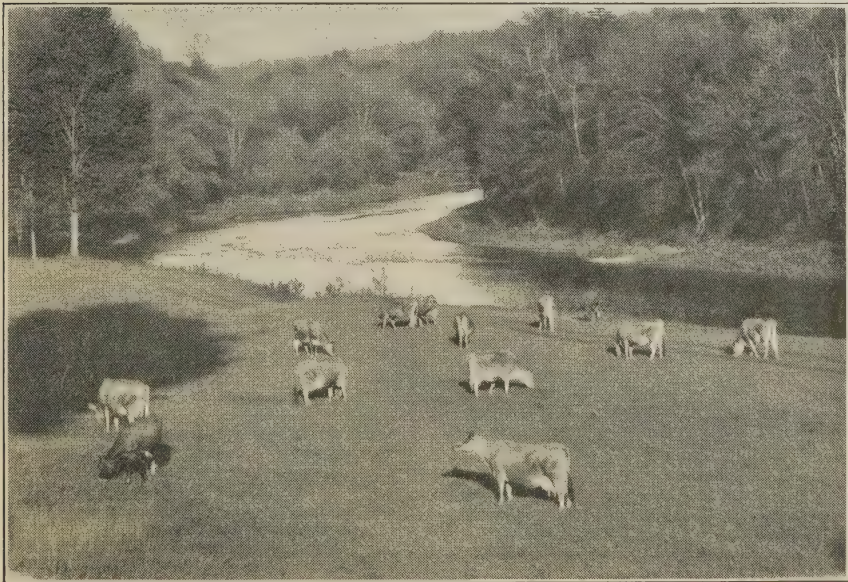
The statistics (1921) upon which the above computation is based follow:—

#### CHEESE

Number of factories.....	845	
Number of patrons.....	31,204	
Cheese produced (pounds).....	92,500,000	
Value at 16½ cents per pound.....		\$ 15,262,500

#### BUTTER

Number of creameries.....	212	
Number of patrons.....	73,312	
Butter produced (pounds).....	51,000,000	
Value at 34 cents per pound.....		17,340,000
Condensed milk, powdered milk, casein (estimate).....		10,000,000
Ice cream, milk, cream, soft cheese, buttermilk, whey, disposed of by factories (estimate).....		6,000,000
Farm butter, milk used on farms, urban milk supply, ice cream, etc. (estimate).		25,000,000
		<hr/> \$ 73,602,500



A dairy herd in beautiful surroundings. Scene in the Province of Ontario.

Domestic milk and ice cream consumption are increasing from year to year; and with a growing appreciation of the food value of cheese and butter, the home market becomes of great importance. The volume of butter produced in Ontario is, however, increasing much more rapidly than consumption, so that Ontario must in future count upon disposing of considerable quantities of butter, as well as large volumes of cheese, in the markets of the world. With this in view, the manufacturers of cream-

that Ontario can produce the very best cheese and butter, and it only requires a realization on the part of producers and manufacturers of the importance of quality, to place Ontario dairying in a very strong position, both in the home and foreign markets. With provisions made for payment for milk used for cheese-making purposes on a butter fat basis, and with Government assistance available to finance the erection of large plants to replace small factories, with a complete system of inspection and



Judging Aged Ayrshire Cows in Milk at the Royal Agricultural Winter Fair, held in Toronto in 1922. The number of entries in dairy cattle of all classes was 1,380.

ery butter are this year paying more attention to quality and the requirements of export markets.

The possibilities for the development of the dairy industry are limited only by ability to produce quality. It has been demonstrated

instruction in both the cheese factories and creameries, linked up with a Federal grading service for all goods to be exported, there is no reason why Ontario should not look forward with confidence to a healthy development of the dairy industry.



## QUEBEC

The large measure of agricultural prosperity enjoyed by the province of Quebec is due in no small degree to the development of the dairy industry. Climatic conditions, which include a moderate degree of heat and cool nights in summer, supplemented by verdant pastures and an abundant supply of pure water, contribute to the fine flavour and good keeping qualities of Quebec's dairy products. These advantages enable dairymen to supply cream and

Out of 679 creameries, 400 do their own separating; the others gather the cream from the farmers. The acidity of this cream in a great many cases does not exceed 0.22; a large quantity does not exceed 0.18.

A system of factory inspection has been in operation for over thirty years. The inspectors cover the province several times during the season, give instruction where necessary, see that all regulations are



Dairy Cattle in Pasture, Eastern Canada.

milk to the factories in the best possible condition, and the greater part of the butter is made from sweet cream.

In 1921, there were 1,768 factories, including 679 creameries, 750 cheese factories and 330 combined factories (producing cheese and butter) with an output of 48,630,403 pounds of butter and 54,242,735 pounds of cheese. If to this is added the quantity of butter made in the towns, the total production of the province can be figured as 60,000,000 pounds of butter for 1921.

complied with and that sanitary conditions prevail. By-products returned to the farm must be pasteurized.

Cow-testing as a means to herd improvement is general in Quebec, and since 1915, the average yield per cow has increased from 5,285 pounds milk and 195.5 pounds fat to 5,801 pounds milk and 214 pounds fat in 1921.

The production of milk is rapidly increasing each year and if dairy products, such as butter and cheese, do not show a corresponding increase, it is on account of the quantity of milk supplied for urban consumption.

## MANITOBA

The strongest branch of the dairy industry in the Province of Manitoba is the creamery butter business. At present a total of 54 creameries are in operation. Most of these continue in operation throughout the entire year. All the creamery butter is government inspected and graded, and on May 1, 1923, a universal system of government grading of cream was introduced into every creamery.

Cheesemaking is not largely carried on, though there are about half a dozen cheese factories doing a good business and finding an excellent market within the province.

The city milk and sweet cream trade is very active in the Winnipeg district.

The output of dairy products in Manitoba in 1922 was officially estimated as follows:—

Product	Pounds	Price		Total Value	
		\$	cts.	\$	cts.
Creamery butter.....	10,559,601*	0	35	3,695,860	35
Dairy butter.....	9,177,344	0	22	2,019,015	68
Cheese.....	225,000	0	16 $\frac{3}{4}$	37,687	50
Milk.....	185,577,406	0	02 $\frac{1}{2}$	4,639,435	15
Ice cream (gallons).....	430,147	1	45	623,713	15
Sweet cream for domestic purposes (in lbs. butterfat).....	3,546,278	0	40	1,418,511	20
Total.....				12,434,223	03

\*Increase over 1921, 2,009,496 pounds.

One hundred and fifteen carloads of creamery butter were shipped out of the province in 1922. This represents 2,556,120 pounds, valued at \$894,642. A few carloads were consigned direct from Manitoba creameries to British dealers, and favourable reports were received on these shipments. A number of cars were sold on the Pacific Coast. The larger part, however, went to Montreal and Toronto. On account of the duty of 8c per pound on butter entering the United States, not as many carloads were shipped across the border as in the previous year.

The number of cattle in Manitoba in June, 1922, was officially placed at 740,740, of which 252,245 were milch cows. Of the purely dairy

breeds there are not a great many head outside the districts that are serving the city milk trade. The dairy breeds that stand most in favour are the Holstein and the Ayrshire, while the Red Poll has some following as a general purpose cow. Taking the province as a whole, many of the cows that are being milked show the Shorthorn strongly in the foreground of their breeding.

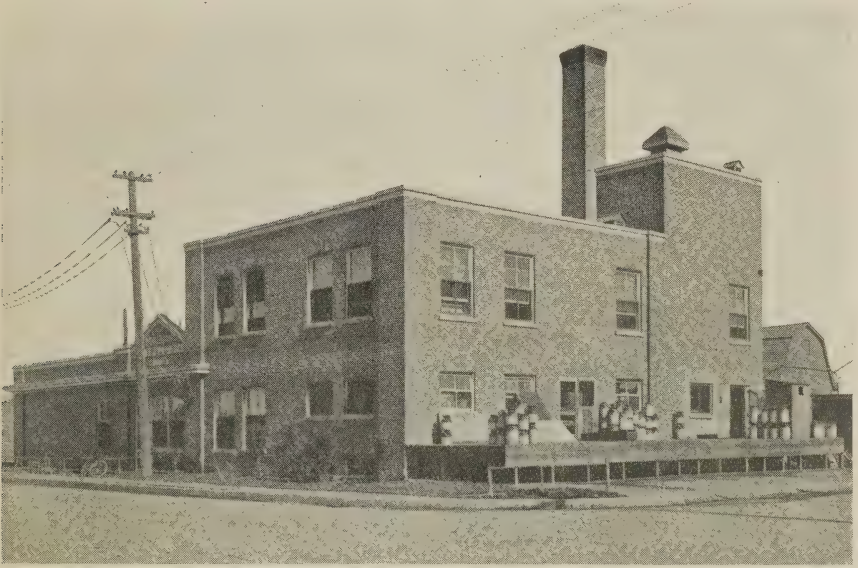
Cow testing is being carried on to some extent, and indications of improvement in productive capacity are evident.

Manitoba dairymen are well off from a feed standpoint; they have "roughage", "concentrates," and "succulence" readily available.



In some parts of the country there is still a good extent of native pasture. Such grasses as awnless brome, western rye grass, timothy, meadow fescue and red top are successfully grown. Of the legumes, either alfalfa or sweet clover may be used in every

for silage purposes in the remaining districts. Those who have used the silo are very pronounced in their opinion that winter dairying by the aid of the silo is a success. Native hay is abundant in some parts of the country, while there is a very large



Exterior of a Western Canada Butter Factory.

part of Manitoba, while red clover does very well in the eastern part of the province. Sweet clover particularly is coming into vogue almost everywhere. Corn (maize) is grown very successfully in a least half of the occupied area of Manitoba, and sunflowers are being introduced rapidly

supply of straw everywhere. Soiling crops, though little used as yet for summer feeding, may be most successfully handled; and, last but not least, there are plenty of comparatively cheap grains and screenings from the commercial cereals.

## SASKATCHEWAN

The dairy industry of the province of Saskatchewan, while still in its infancy, has shown steady growth during the last few years. The uncertainties connected with exclusive grain growing are gradually leading to the adoption of more diversified types of farming, and as the dairy cow is proving the most profitable

form of live stock to keep, she is rapidly gaining in favour.

Apart from the requirements of the local milk and cream trade, the dairying activities of the province are concerned chiefly with the production of creamery butter.

During the first years of the present century dairying as an industry may

be said to have been non-existent in Saskatchewan. In 1912 the production of creamery butter was 1,009,604 pounds; in 1922 it was 8,901,105 pounds, an increase of 78 per cent in ten years. Notwithstanding this rapid growth the industry is still very small for a province that has 94,000,000 acres of cultivable land. Out of a population of 760,000, with 72 percent resident on the land, there were not more than 30,000 farmers, in 1922, patronizing any kind of dairy factory, and on many farms, not even a family cow is kept.

creameries are equipped for pasteurization and no raw butter is made. The principle of the payment of cream according to grade has been adopted in Saskatchewan, and is being carried out under agreements between the government and the individual creameries, and according to standards fixed by Order-in-Council. Official graders are located at the creameries to enforce the regulations.

A butter grading service is furnished by the province, through the Dairy Branch, and, in 1922, 90 per cent of the entire output was officially



Headquarters of the Saskatchewan Co-operative Creameries, Limited, Regina, Sask.

Being an industry of recent growth, and having a clear field, Saskatchewan, in common with Alberta and Manitoba, has been able to put modern methods into successful operation, and these provinces now compare favourably with the older parts of the Dominion in the quality and uniformity of the butter produced. Many problems, still acute and hard to solve in the older provinces, have hardly existed in the West, or if they did exist, their solution has been a comparatively simple matter. The ready adoption of pasteurization of cream for buttermaking is an example of this. In Saskatchewan all

graded. In that year 56 percent of the creamery butter manufactured was shipped out of the province under government grade certificates.

The Saskatchewan Co-operative Creameries, Limited, owns and operates 28 creameries and seven public cold storages. During 1922, this farmer-owned co-operative company manufactured 42 percent of the creamery butter output of the province. The privately owned creameries number 36, making a total of 64 creameries in operation in 1923.

Local supervision and direction of Saskatchewan dairying is in the hands of the Dairy Branch of the Provincial



Department of Agriculture, while instruction and extension activities and experimental work are looked after by the dairy department of the Provincial University at Saskatoon. All students in agriculture at that institution take at least one full course in dairying. The provincial Dairy Association conducts a number of competitions in the interest of dairying. Of these the two most important are the Average Production Competition for the encouragement of cow testing, and the boys' and girls judging competitions, for which breeders donate pure-bred young stock as premiums.

With two thirds of the arable land of the province still unsettled, and with the entire arable area well suited to dairying, it is evident that only the fringe of the possibilities have been touched. Quality and uniformity of the finished product are the watchwords of the industry; a spirit of co-operation exists between producer and manufacturer; and, with all these facts in mind, there can be little room for doubt about the future of dairying in Saskatchewan. A fairer field for the development of the industry in either production or manufacturing would be difficult to find.

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## ALBERTA

The Province of Alberta possesses great natural advantages for dairying, and the manufacture of creamery butter—which had established a reputation for quality previous to the War—is one of the province's important and growing industries.

Recently, vigorous steps have been taken to place the industry on an improved basis by the elimination of the cream buying station—resulting in the shipment of cream direct to creameries—and by the establishment of a system of government grading at the point of manufacture. Great improvement in quality is resulting, and at the same time a marked increase in production is taking place, the output for 1922

being some two million pounds greater than in the year previous. The main problem is to find and hold remunerative markets for the growing surplus.

Alberta was the first province of Canada to pass legislation making the grading of cream as received at creameries compulsory. Alberta was also the pioneer in the matter of grading butter.

The Dairy Branch of the Provincial Department of Agriculture is responsible for the field work among the creameries; the grading of cream and butter; and the general supervision of the industry. The Dairy Department of the University of Alberta holds courses in dairying during the winter months.

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## BRITISH COLUMBIA

Dairying, with a few localized exceptions, is regarded as essential to successful agriculture in British Columbia, and has great possibilities for the extension in undeveloped districts well suited to the growing of forage crops and the rearing of cattle.

The industry is well established at the mouth of the Fraser River and adjacent territory, on Vancouver Island and the islands of the Gulf of Georgia, and in the Okanagan Valley in the Interior. In the sparsely settled districts of Central British Columbia and in the Caribou and Columbia Valley districts, a good beginning has been made.

In several sections of the Province, corn yields well for ensilage, while enormous crops of roots can be secured in other parts. Alfalfa is successful in the irrigated districts, and, everywhere, red clover and green mixtures, such as peas, oats and vetches, give excellent yields.

The four leading pure breeds of dairy cattle are represented, the Holstein and Jersey predominating, with the Guernsey and Ayrshire less prominent. Grade milking Short-horns are common.

Cow-testing associations and cow testing centres have been for several years in operation, mainly with grade herds, and good progress has been made. The average of all completed lactation periods recorded during 1922

showed a yield of 7,073 pounds milk and 316 pounds fat.

There are in British Columbia twenty-five creameries, three condenseries, two cheese factories, and several plants devoted solely to the manufacture of ice cream. One half of these institutions are co-operative, owned by the dairy farmers.

The total dairy production for 1915 was valued at \$3,034,340, for 1922 at \$8,001,135.

Prices for dairy products are uniformly somewhat higher than in the more eastern provinces, owing chiefly no doubt, to British Columbia being still an importing province.

Several million pounds of butter and considerable cheese come in annually from without. Production, however, is steadily if slowly increasing.

Splendid opportunities exist for prospective dairy farmers on the newer lands of the province in what are known as settlement areas. These areas have been established in Central British Columbia along the Grand Trunk Pacific Railway, and the Pacific Great Eastern Railway, only such land being included as is suitable for agricultural purposes, including the growing of forage crops and the rearing of cattle. This establishment has resulted in providing land for settlers at reasonable prices, and with its development, which is now rapidly taking place, a marked extension of the dairy industry in the Province may be looked for.





Dairy Farm and Ayrshire Herd at Sardis, British Columbia.

## NOVA SCOTIA

The province of Nova Scotia, located on the Atlantic seaboard possesses natural conditions as to soil and climate that are highly favourable to the dairy industry. In almost all sections of the province, apart from the well known apple growing districts, the possibilities are greater for the development of dairying than any other branch of agriculture.

The population is approximately 500,000. Mining, lumbering and fishing are, apart from farming, the leading industries, and the industrial population provides a good domestic market for dairy products. Proximity to Halifax, the capital, with its remarkable harbour, places the producer in a favourable position for exporting to Great Britain.

The statistics of the dairy industry for Nova Scotia in 1922 were as follows:

No. of cows.....	143,780		
Amount of milk produced per cow.....	4,055 lbs.		
Average test of milk.....	3.8%		
Total pounds of milk produced.....	583,027,900 lbs.		
Total pounds of butter fat.....	22,155,060 "		
Value of fat at 38 cents per pound.....		\$	cts.
		8,418,922	80
Value of skim milk allowing 80 pounds to 100 of milk at 20 cents per cwt....		932,844	60
Total value of milk produced.....		9,351,767	40

The creameries operating throughout the province are for the most part co-operatively owned. All are regulated by *The Dairymen's Act* (Nova

Scotia), which provides for a regular system of inspection by officers of the Provincial Department of Agriculture.

## NEW BRUNSWICK

The dairy cow has had a prominent place in New Brunswick agriculture from the time of the earliest settlement. Climatic conditions are such as to make it comparatively easy to produce milk and cream of good quality. During the summer months the weather is not excessively hot, and the nights, as a rule, are cool. Rainfall and moisture are usually sufficient to produce excellent pasturage, roughages and succulent foods are easily grown, and most farms are well supplied with water and shade.

For upwards of thirty years the Government has encouraged the establishment of creameries and cheese factories. Of recent years, the main

effort has been towards centralization, with a view to prevent duplication of machinery and overhead charges. In addition, an efficient system of practical instruction and inspection is maintained through the Dairy Division of the Provincial Department of Agriculture. A rapid improvement in the quantity, quality and uniformity of product is resulting.

There are in New Brunswick thousands of acre of rich loamy soil on which reside men and their families who have heretofore divided their attentions between farming and lumbering or farming and fishing. In many of these sections, dairying is following in the wake of lumbering,





Jersey Cows in Pasture. Comox District, British Columbia.

and it is to these extensive areas that dairying looks for its future development. In the matter of markets, New Brunswick dairymen occupy a favourable position, as the home demand is in excess of the supply.

As yet only the very fringe of the possibilities of New Brunswick dairying has been touched and the province offers unsurpassed opportunities to those engaging in the industry.

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### PRINCE EDWARD ISLAND

Prince Edward Island, though the smallest of the provinces, is favoured with a fertile soil and a temperate and equable climate. Crop failures are consequently rare. General agriculture is followed, with dairying an important feature. Climatic conditions favour a high class dairy product, pastures are good, the soil produces an abundance of suitable crops, and factories are well established. Both butter and cheese are made, and the volume of the output tends to increase. Butter and cheese

have been produced in the province for over one hundred and fifty years, but the first cheese factory was not established until 1883 and the first creamery till 1897. The present tendency is to consolidate creameries with a view to more efficient management and operation.

In order to secure a uniform make of butter and cheese, and to raise the quality of the output, inspectors are employed to visit and inspect factories and to give instruction to makers where needed, and also to patrons.

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## DIRECTORY

### GOVERNMENT OFFICIALS

Dominion of Canada, Department of Agriculture.....	J. A. Ruddick, Dairy and Cold Storage Commissioner, Ottawa.
Province of Ontario.....	G. A. Putnam, Director of Dairying, Toronto, Ont.
“ Quebec.....	E. Bourbeau, Department of Agriculture, Quebec.
“ Manitoba.....	L. A. Gibson, Dairy Commissioner, Winnipeg, Man.
“ Saskatchewan.....	P. E. Reed, Dairy Commissioner, Regina, Sask.
“ Alberta.....	C. Marker, Dairy Commissioner, Edmonton, Alta.
“ British Columbia.....	Henry Rive, Dairy Commissioner, Victoria, B.C.
“ Nova Scotia.....	W. A. MacKay, Dairy Superintendent, Truro, N.S.
“ New Brunswick.....	Harvey Mitchell, Deputy Minister of Agriculture, Fredericton, N.B.
“ Prince Edward Island..	W. J. Reid, Department of Agriculture, Charlottetown.

## CANADIAN DAIRY ORGANIZATIONS

*National Dairy Council of Canada.*—Secretary, D'Arcy Scott, Central Chambers, Ottawa.

*Ontario Dairy Council.*—Secretary, J. P. Griffin, 186 King Street West, Toronto.

*Dairymen's Association of Western Ontario.*—Secretary, Frank Hens, 43 Bank of Toronto Chambers, London.

*Dairymen's Association of Eastern Ontario.*—Secretary, T. A. Thompson, Almonte.

*Quebec Dairymen's Association.*—Secretary, Alexandre Dion, Department of Agriculture, Quebec, Que.

*Manitoba Dairy Association.*—Secretary, L. A. Gibson, 301 Beverley St., Winnipeg.

*Saskatchewan Dairy Association.*—Secretary, P. E. Reed, Department of Agriculture, Regina.

*Alberta Dairymen's Association.*—Secretary, E. T. Love, Edmonton.

*British Columbia Dairymen's Association.*—Secretary, Henry Rive, Dairy Commissioner, Department of Agriculture, Victoria.

*New Brunswick Dairymen United.*—Alex J. Doucet, Notre Dame, Kent Co.

*Nova Scotia Dairymen's Association.*—Secretary, W. A. MacKay, Truro, N.S.

*Prince Edward Island Dairymen's Association.*—Secretary, J. F. Profit, Kensington, P.E.I.



Cold Storage Warehouse, Montreal Harbour.



















